

Application No. 10/092,033
Filed: March 5, 2002
TC Art Unit: 3739
Confirmation No.: 7761

REMARKS

Claims 1-11 and 21-26 have been rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. Applicants respectfully traverse this rejection. The Office Action asserts that the "invention, and thus the disclosure, is specifically directed to use of an arc lamp as the excitation light source." The Applicants assert that this ignores the clear teachings of the present application as well as the parent application that was incorporated by reference at page 8, lines 2-5, and mentioned again at page 10, lines 13-14. The specification than literally states that:

"Other laser sources can be used (as the UV excitation source) including solid state lasers, such as gallium nitride laser diodes, operating at wavelengths in the range of 380 nm to 420 nm, which have smaller size and low power operation."

Note specifically, the description of two separate embodiments described at the bottom of page 8 (lines 23-28): In the first embodiment an arc lamp is specifically described as a source for both excitation illumination and reference illumination (See Figs. 3, 8a, and 10a, for example). The specification than goes on to state that:

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"In other embodiments the excitation light can be generated with a stand-alone source...".

Such a stand-alone source is illustrated in Figs. 11a-d and 12, for example, and are not limited to arc lamps. One skilled in the art would readily understand, based upon the literal description set forth in the specification, that a diode laser can be used as a stand-alone UV source. The Office Action makes reference to certain portions of the specification (e.g. page 10, lines 16-20 and page 12, lines 2-4). However, these related to the pulsed arc lamp used in Fig. 3, for example, for both UV and reference light and indicate certain advantages of this embodiment. However, this is not the only embodiment or the only CCD referenced by the Applicant. Additionally, the present specification makes repeated references to other excitation bands besides that at 365nm that induce fluorescence that are useful to obtain diagnostic information in accordance with the invention. The fact that one of the CCDs employed in conjunction with the invention has a "spectral response (that) falls off to zero quickly at wavelengths below 400nm" does not mean that an excitation wavelength above 400nm cannot be used. In fact this is specifically contrary to the literal teaching of the application! In the "Summary of the Invention" at pages 4-5 of the specification, the excitation wavelength range is specifically recited as 300-420nm. The choice

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of excitation wavelength is based upon a number of factors, including the specific type of condition to be diagnosed (e.g. colon, esophagus, lung, etc.), the excitation source suitable for that condition as well as the spectral response of the detector.

Claims 1-9, 11 and 21 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Palcic (5,827,190). As indicated previously, Palcic fails to disclose the use of diode laser light source. Palcic also fails to disclose the use of red, green, and blue wavelength bands in connection with the reference light. See Palcic, column 5, lines 18-49 and again in connection with Fig. 5 at column 10, lines 13-39, for example, where red light is used as a reference.

Claims 10, 25 and 26 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Palcic in view of Imaizumi. Imaizumi is cited as teaching a diode laser to illuminate with 780nm light, for example, to excite a tissue label, not an image based on autofluorescence as in the amended claims.

Claim 22 has been rejected under 35 U.S.C. §103(a) based upon the above combination of references and further in view of Perelman. Claim 22 is believed to be patentable in view of amended claim 1. Perelman also does not disclose or suggest the claimed combination.

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Claims 23 and 24 have been rejected under 25 U.S.C. §103(a) as being unpatentable over Palcic in view of Imaizumi and further in view of Poindexter. However, Poindexter relates to a system for measuring exhaust gases of an internal combustion engine. One skilled in the art would not look to Poindexter to discern how to measure tissue autofluorescence.

Claims 1-6, 8-11, 21, 23 and 24 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Kaneko (5,749,830) in view of Poindexter (5,979,523). Claim 22 has been rejected based upon the above combination and further in view of Perelman. Claims 25 and 26 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Kaneko in view of Poindexter and further in view of Groner.

However, Poindexter as indicated above, relates to a gas sensor for an internal combustion engine. One skilled in the art would not look to Poindexter to decipher which light source to use for inducing autofluorescence in tissue for an endoscope system.

The rejection of the claims is believed to be obviated in view of the above and reconsideration is respectfully requested.

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The Examiner is encouraged to telephone the undersigned attorney to discuss any matter that would expedite allowance of the present application.

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